

What is claimed is:

- 1 1. A method of processing paging information in a communications system, the method
2 comprising:
3 operating a first node to receive said paging information, said paging information
4 including at least one of a quality of service indicator, a type indicator, a source indicator, and a
5 destination indicator; and
6 operating the first node to determine from said received paging information a paging
7 requirement, said paging requirement being determined as a function of said at least one of a
8 quality of service indicator, a type indicator, a source indicator, and a destination indicator.
- 1 2. The method of claim 1, further comprising:
2 operating said first node to allocate a paging transmission resource for transmitting a
3 page as a function of the determined paging requirement.
- 1 3. The method of claim 2, further comprising:
2 operating said first node to transmit a page using the allocated paging transmission
3 resource.
- 1 4. The method of claim 3, wherein said step of transmitting a page includes incorporating
2 into said page information indicating a state of device operation, in which a device to which said
3 page is directed, is to operate after receiving said page.
- 1 5. The method of claim 2, further comprising:
2 operating said first node to communicate a paging signal to a second node, indicating
3 allocation of a paging transmission resource for use in transmitting a page corresponding to said
4 received paging information.
- 1 6. The method of claim 1, further comprising:
2 operating said first node to communicate said determined paging requirement to a second
3 node in a paging request message.

1 7. The method of claim 6, wherein said page request message includes at least a portion of
2 said received paging information.

1 8. The method of claim 7, wherein said determined paging requirement, indicated in said
2 paging request message, is that said portion be included in a page.

1 9. The method of claim 6, wherein said determined paging requirement, indicated in said
2 paging request message, is that a page be acknowledged.

1 10. The method of claim 6, wherein said determined paging requirement, indicated in said
2 paging request message, is a quality of service.

1 11. The method of claim 10, wherein said quality of service includes a page transmission
2 timing constraint.

1 12. The method of claim 10, wherein said quality of service is one of a plurality of levels.

1 13. The method of claim 10, wherein said quality of service requires that a page be
2 transmitted multiple times.

1 14. The method of claim 10, wherein said quality of service requires retransmission of a
2 page at least once in the absence of an acknowledgment.

1 15. The method of claim 14, further comprising:
2 operating the second node to cause said re-transmission of said page to be into a
3 geographic area larger than an initial transmission area of said page.

1 16. The method of claim 6,
2 wherein said determined paging requirement, indicated in said paging request message,
3 is a quality of service level; and
4 wherein said page request message includes paging resource allocation information
5 indicating a fraction of a paging resource to be allocated by said second node to pages having
6 said quality of service level, the method further comprising:

7 operating the second node to allocate said fraction of said paging resource to pages
8 having a quality of service level indicated in said paging request message.

1 17. The method of claim 6, further comprising:
2 operating said second node to allocate a paging transmission resource for transmitting a
3 page, as a function of said determined paging requirement, indicated in said paging request
4 message.

1 18. The method of claim 17, further comprising:
2 operating said second node to transmit a page using the allocated paging transmission
3 resource.

1 19. The method of claim 17, further comprising:
2 operating said second node to communicate a paging signal to a third node, indicating
3 allocation of a paging transmission resource for use in transmitting a page corresponding to said
4 paging information.

1 20. A machine readable medium including a data structure in the form of a paging request
2 message stored thereon, said paging request message including:
3 a source node identifier;
4 a destination node identifier;
5 and
6 paging message requirement information.

1 21. The machine readable medium of claim 20, wherein said paging request message further
2 includes:
3 a paging message payload including information to be transmitted in a page.

1 22. The machine readable medium of claim 20, wherein said paging message requirement
2 information includes:
3 information indicating whether or not an acknowledgement to a page is required.

1 23. The machine readable medium of claim 22, wherein said paging message requirement
2 information includes:
3 information indicating a number of retransmissions to be made if a page
4 acknowledgement is not received.

1 24. The machine readable medium of claim 22, wherein said paging message requirement
2 information includes:
3 page transmission quality of service information.

1 25. The machine readable medium of claim 22, wherein said paging message requirement
2 information includes:
3 page transmission timing constraint information.

1 26. The machine readable medium of claim 22, wherein said paging message requirement
2 information is stored in an encoded format and includes at least page transmission quality of
3 service information and page transmission timing constraint information.

1 27. A communications system comprising:
2 a first node including:
3 i) means for receiving paging information, said paging information including at least one of a
4 quality of service indicator, a type indicator, a source indicator, and a destination indicator; and
5 ii) means for determining from said received paging information a paging requirement, said
6 paging requirement being determined as a function of said at least one of a quality of service
7 indicator, a type indicator, a source indicator, and a destination indicator.

1 28. The system of claim 27, wherein said first node, further comprises:
2 means for allocating a paging transmission resource for transmitting a page as a function
3 of a determined paging requirement.

1 29. The system of claim 28, wherein said first node further includes a radio transmitter for
2 transmit a page using the allocated paging transmission resource.

1 30. The system of claim 29, wherein said first node further includes:

2 means for generating a paging request message including information indicating said
3 determined paging requirement; and
4 means for transmitting said paging request message to another node.

1 31. The system of claim 30, wherein said page request message includes at least a portion of
2 said received paging information and wherein said determined paging requirement, indicated in
3 said paging request message, is that said portion be included in a page.

1 32. The system of claim 30, wherein said determined paging requirement, indicated in said
2 paging request message, is that a page be acknowledged.

1 33. The system of claim 30, wherein said determined paging requirement, indicated in said
2 paging request message, is a quality of service requirement.

1 34. The system of claim 30, further comprising:
2 a second node, said second node including:
3 i) means for receiving said paging request message;
4 ii) means for allocating at least one paging resource as a function of paging requirement
5 information included in a received paging request message; and
6 iii) means for transmitting a page to a mobile node using the at least one allocated paging
7 resource.